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U. S. DEPARTMENT OF AGRICULTURE.

OFFICE OF EXPERIMENT STATIONS.

W. O. ATWATER, DIRECTOR.

EXPERIMENT STATION BULLETIN, No. 3.

REPORT

OF A

MEETING OF HORTICULTURISTS

OF THE

AGRICULTURAL EXPERIMENT STATIONS,

AT

COLUMBUS, OHIO, JUNE 13, 14, 1889.

BY

A. W. HARRIS, Assistant Director.

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF EXPERIMENT STATIONS,
Washington, D. C., July 31, 1889.

SIR: I have the honor to transmit herewith for publication Experiment Station Bulletin No. 3, of this Office, containing a report of the meeting of horticulturists of the Agricultural Experiment Stations, at Columbus, Ohio, June 13, 14, 1889, by the Assistant Director of this Office, who attended the meeting as the representative of the Office of Experiment Stations of this Department.

Respectfully,

W. O. ATWATER,
Director.

Hon. J. M. RUSK,
Secretary of Agriculture.

REPORT

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MEETING OF HORTICULTURISTS OF THE AGRICULTURAL EXPERIMENT STATIONS, AT COLUMBUS, OHIO, JUNE 13, 14, 1889.

U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF EXPERIMENT STATIONS,
Washington, D. C., July 31, 1889.

SIR: I have the honor to submit a report of the meeting of Station Horticulturists at Columbus, Ohio, which I attended as a representative of the Office of Experiment Stations, under authority of a commission issued June 9, 1889.

The meeting was called by the horticultural committee of the Association of American Agricultural Colleges and Experiment Stations. This committee, consisting of three station horticulturists, was appointed at the Knoxville convention of the association to devise a plan for co-operation between the various stations in testing new varieties of fruits and vegetables. The correspondence of the committee and the execution of its plans were to be left largely to the Office of Experiment Stations.

The association was actuated in this matter by the following considerations. It is very desirable that new varieties should not be presented to the public until tested by some competent authority, and that their values should be guaranteed in a manner which will inspire the confidence and trust of the public. Tests of this character can not be satisfactorily made by single stations, since the influence of climate and locality should be taken into account; nor can satisfactory comparison of the work of the several stations be made without a certain degree of uniformity in methods of testing and reporting. As a rule originators wish to have their new varieties tested under varying conditions, provided their interests can be carefully guarded, since such tests will be not only a benefit to the public, but also a protection and encouragement to honest dealers.

To carry into effect the plans of the association, this Office prepared and issued, for the committee, a list of originators in the United States. The list is as yet incomplete, but furnishes the basis for a useful and

necessary compilation. The attempt has also been made to prepare a list of station horticulturists, with their specialties. The object of the first of these lists is to enable station officers to obtain varieties before public distribution; that of the second is to enable originators to promptly put their plants where they will receive careful and immediate attention.

As most of the stations have not yet finally determined upon their plans of horticultural work, it was found that correspondence was very unlikely to give the necessary data for these lists. In order that station workers might have an opportunity for consultation upon this matter, the committee issued a call for a meeting of horticulturists to be held at Columbus, Ohio, beginning June 13.

The following is a brief summary of the proceedings of the meeting, which occupied the afternoon and evening of the 13th and the morning of the 14th. The main question, regarding co-operative tests of varieties, was thoroughly discussed in detail. It was decided that stations ought not to *buy* new varieties; that uniform methods of note-taking were probably not practicable; that in reporting results to the public the stations should adhere to the forms provided by the Office of Experiment Stations of the Department of Agriculture; that a guarantee should be given to originators that the stations should not distribute new varieties to the public; that stations should insist upon the privilege of furnishing new varieties to each other.

Two other matters are worthy of special note. The first is the decision that the reports of tests of varieties by the various stations should be published collectively by the Office of Experiment Stations. The reason for this decision is that the value of this kind of horticultural work to the general public is greatly increased by the union in a single publication of reports from a large number of points within a wide area. The second is the appointment of a committee on nomenclature, to regulate, if possible, the naming of new varieties of vegetables with a view to preventing the use of foolish or laudatory names.

Among the general impressions left by this meeting were a pleasant remembrance of the earnestness and efficiency with which its work was done; of the cordiality of the station workers toward each other; and of the kindly spirit manifested toward the Department, and the appreciation shown of its work and its desire to assist the stations. No small part of the value of the meeting, as it seems to me, lies in the acquaintance with each other and with each other's plans which the horticulturists have gained, and the encouragement derived for the undertaking of work of scientific and permanent value. The results of this meeting seem to strongly confirm the wisdom of the Association of American Agricultural Colleges and Experiment Stations in providing for the attendance of other members of the station staffs as well as the directors at its future conventions. In view of the expense which would be entailed upon the stations by the attendance of large numbers of the

working staffs at such meetings, the success of this meeting may suggest the adoption of some such plan as that used by the New England Association of College Presidents and Professors in accordance with which each meeting makes the work of some one department a subject of especial consideration, and delegates representing that department are present from different colleges.

The detailed report of the meeting, furnished by the secretary, Professor Bishop, of the Maryland Agricultural Experimental Station, is presented herewith.

Respectfully,

A. W. HARRIS,
Assistant Director.

Hon. J. M. RUSK,
Secretary of Agriculture.



REPORT OF THE SECRETARY.

W. H. BISHOP.

In response to a call issued by the Committee on Co-operative Work in Horticulture, appointed at the Knoxville meeting of the Association of American Agricultural Colleges and Experiment Stations, a number of horticulturists and others met at the Ohio State Experiment Station at Columbus, Ohio, on Thursday, June 13, 1889, to consider topics upon which conference was desired, and especially to devise means for furthering co-operation in the horticultural work of the experiment stations.

The following gentlemen were present:

W. B. Alwood, Botanist and Entomologist of the Virginia Agricultural Experiment Station.

L. H. Bailey, Horticulturist of the Cornell University Agricultural Experiment Station.

W. H. Bishop, Horticulturist of the Maryland Agricultural Experiment Station.

George C. Butz, Horticulturist of the Agricultural Experiment Station of Pennsylvania.

W. J. Green, Horticulturist of the Ohio Agricultural Experiment Station.

A. W. Harris, Assistant Director of the Office of Experiment Stations, U. S. Department of Agriculture.

J. Fremont Hickman, Agriculturist of the Ohio Agricultural Experiment Station.

W. R. Lazenby, Professor of Horticulture and Botany in the Ohio State University.

L. R. Taft, Professor of Horticulture of the Experiment Station of Michigan Agricultural College.

Charles E. Thorne, Director of the Ohio Agricultural Experiment Station.

James Troop, Horticulturist of the Agricultural Experiment Station of Indiana.

Clarence M. Weed, Entomologist of the Ohio Agricultural Experiment Station.

The first session was called to order at 2 p. m., June 13, 1889, and organized by the election of W. B. Alwood as chairman, and W. H. Bishop as secretary.

Discussion was then opened upon the question, "How can the stations best secure new fruits and vegetables for testing? Ought they to buy them?" Mr. Taft thought that the stations ought not to buy, but that at present they would be obliged to, especially those varieties of fruits already on the market.

Mr. Green said that he had with very little trouble generally obtained new varieties as gifts from the originators and thought that the stations ought to pay only for those varieties already on the market, and that usually varieties ought not to be solicited, as it is to the advantage of the originators that the tests should be made by the stations.

The opinion was generally expressed that since the value of a variety can not be determined until it has been tested in several places, each horticulturist should be at liberty to propagate new varieties for distribution among the stations, provided a guarantee be given not to disseminate a variety before introduction. It was also urged that it would soon be impracticable to purchase plants of each new variety because of the increasing burden of the expense.

Upon motion it was resolved that the stations ought not to *buy* new varieties before they are put on the market.

The question of uniform blanks for reporting to originators and other workers was next discussed. Mr. Bailey thought that uniformity in note-taking was impossible, and probably not desirable, and said that he preferred the paragraph system to the columnar, with a schedule of salient points to work from. This schedule of points would necessarily vary somewhat in different localities for the same fruit. Hardiness, for example, would be a paramount quality in the north, while in the south it might be far less important. However, a few points that are important in all sections could be agreed upon and included in every plan of note-taking.

It was suggested by Mr. Lazenby that a scale of points for a perfect fruit might be established for reference in judging a variety.

In the reports to originators and for publication all points should be included that are of value to the persons using the plant, such as productiveness, size, quality, freedom from disease, etc.

It was also suggested that several sets of blanks might be necessary, unless only part of the headings were printed. A report upon a new variety should be accompanied by a similar report upon one or more well-known old varieties, in order that a comparison might be made between the new and the old. It was agreed that in making reports to originators it would be well to adhere to the forms provided by the Office of Experiment Stations of the U. S. Department of Agriculture, and to refuse further testimonials.

The list of originators in the United States, prepared by the Office of

Experiment Stations for the committee on horticulture, and the best means for its extension and revision, were next discussed.

Without active co-operation on the part of the station horticulturists the list would soon be cumbered with names of no value. Each horticulturist should, therefore, assist in maintaining its value by keeping a record of information which would be of service to the revisers of the list.

In sending names for the list station officers should not confine their attention to their own States, as the list should be made as complete as possible, and duplicates can easily be erased in making up the list.

At the close of the discussion of this topic the following motion was carried: That when the list of originators is revised the names of nurserymen and seedsmen, unless they are originators or have the entire control of the stock of some new variety of plants, should be stricken off.

On the question of the character of the guarantee to be given when new unintroducted plants are obtained for trial, Mr. Butz thought it should only be promised that the station would not distribute plants and that due care would be exercised to prevent dissemination, but that a station should refuse to be held responsible in case of theft.

Many nurserymen have highly commended the work of the stations in testing varieties, and especially the idea of co-operative work in that direction.

Discussion of the question concerning the number of plants or length of row necessary for a fair trial of a variety of fruit or vegetables resulted in the following recommendations:

(1) Minimum number for first trials of fruits: Strawberries, twenty-four plants; raspberries and other bush fruits, six plants; orchard fruits, three trees. In case a variety is found to be worthy of further tests the number can be easily increased by propagation until sufficient plants are obtained for a thorough and reliable test.

(2) Minimum number for first trials of vegetables: Vegetables in drills, such as roots, peas, etc., fifty feet of row; cabbages, etc., twenty-four plants; potatoes, twenty-six hills, with not less than two eyes per hill; cucurbits, four hills.

Upon motion, it was unanimously resolved that the United States Department of Agriculture could be of very material assistance to horticulture by tabulating the results of trials of new varieties for the special use of the different stations and originators. These reports should be published as bulletins for general distribution, and should contain tabulations of the results of tests of new varieties of fruits and vegetables, accompanied by similar tables for one or more well-established varieties.

At the final meeting, on Friday morning, June 14, a report of the work of the Committee on Horticulture appointed at the Knoxville meeting was made by Mr. Alwood. The blanks to be used in reporting to the Department of Agriculture and to originators were discussed

at length, and the following motions were carried: (1) That the varietal columns should be reduced to twelve; the printed schedule of points should be at the left of the sheet; the size of the sheet should be foolscap; and as many blank lines for special items as possible should be left at the bottom of the sheet. (2) That the headings of the blanks be left to the committee and the Office of Experiment Stations, provided only that the name of the station issuing the report should be prominently placed near the top of the sheet.

"How far is co-operation practicable?" was next discussed.

Mr. Bailey said that there were two kinds of co-operation: official, which was only practicable in testing and reporting upon new varieties, and particularly in the exchange of such varieties between the stations; and the spontaneous co-operation which would naturally spring up among individuals engaged in similar lines of investigation.

Upon motion, the following committee on nomenclature was appointed by the chair: E. S. Goff, of Wisconsin; L. H. Bailey, of New York; and W. J. Green, of Ohio.

It was suggested that as regards fruits the committee would be able to work with the similar committee of the American Pomological Society, but that they would probably be obliged to take the initiative in the matter of vegetables.

A motion was carried requesting the secretary of the meeting to make a résumé of salient points necessary in note-taking.

The following points are suggested as desirable additions to the schedule already published in Documents 11 and 12 (Forms 1 and 2) of the Office of Experiment Stations:

FOR VEGETABLES.	FOR FRUITS.
Seed obtained from ———.	Received from ———.
Length of row, or number of plants, ———.	Date of planting, ———.
Character of soil, ———.	Age of plants or trees, ———.
Character of fertilizer used, ———.	Character of soil, ———.
Fungi, ———.	Cultivation and fertilizing, ———.
Insects, ———.	Fungi and insects, ———.

Although the attendance at this meeting was not large, there was manifest among those present a spirit which promises much in the development of the idea of co-operation among the horticultural workers of the different experiment stations. It was a source of some regret that the numbers at the meeting were not larger, as we feel sure that all present were more than repaid, both in knowledge obtained through comparing notes verbally with each other, and in the development of a fraternal feeling through personal contact. It is to be hoped that, should another meeting be called, a much larger number will avail themselves of the privilege of attending, for it is through active co-operation in all practicable forms that much of the best and most practical work of the horticulturists will be done.